Date: Sat, 20 Feb 93 17:32:43 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #238
To: Info-Hams

Info-Hams Digest Sat, 20 Feb 93 Volume 93 : Issue 238

Today's Topics:

(none)
5/8 Wavelength Antenna Theory?
Antenna Tuner for Blind Ham
Bill Clinton and military surplus
Computer-FT1000 Interface
help aligning Drake ML-2
Long Ground Lines
Morse Code Processor
Old car radios had PTO's
ORBS$051.2liners
RF and Power Supply
visual impaired person tuning manual antenna tuner? (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

Date: 21 Feb 93 18:17:46 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: info-hams@ucsd.edu

In an earlier message in the Info-Hams digest, Michael Owen W9IP asks:

> Emil Pocock, W3EP, the editor of The World Above 50MHz in QST,
> has asked me about bearing & distance calculations. It's easy to
> compute them on a spherical Earth, but somewhat more complicated on
> the "real" non-spherical Earth. I have offered to write a program for

> Emil and his readers that calculates bearing and distance, taking
> into account the shape of the Earth. He wants it for the sake of
> calculating distance-records on VHF. Others might find it useful
> for more precise beam heading at microwaves, for example.
>
> Can anyone out there direct me to the equations necessary for this
> little job ?
>

Any method to calculate distances over a non-spherical earth is at best an approximation, which depends on just how you decide to model the shape of the earth. The degree to which that approximation is acceptable will depend on the use to which you will put your methods. While you may find a method that appears to work well for coordinates specified within a country, you may find odd things starting to happen as you span intercontinental distances. For this problem, you need to specify a method of distance calculation, and a common geoid. While this is perhaps obvious for a country (or for the conterminous United States), you may get differences of opinion between amateurs of different countries. Having attempted in the past to settle differences between claimants to an EME world record where the difference in path length was a few hundred metres, I can say that it is a real problem.

Personally, I think it is really unnecessary to carry out distance calculations to this kind of relative accuracy, so it's an exercise that's perhaps a bit academic, but interesting.

If you can have coordinates specified in a conformal map projection, then the calculation is trivial, since the projection maps points to a plane, and thus the distance is calculated by Pythagoras' theorem, and the azimuth by right-triangle trigonometry. In New Zealand, where we to use the minimum error conformal projection system called the New Zealand Metric Map Grid, life is simple.

Anyway, to your problem specifically... The following is called the Sodano Method, which is not the only method, but it can be easily implemented, and gives good results, provided care is taken to avoid numerical problems. By the way, all these kind of algorithms can suffer numerical "problems" if implemented simplistically. Take care, and check borderline cases very very carefully !

The Sodano method is suitable for lines of any length, except for antipodal points. The latter can be explictly detected and dealt with separately, but that is left as an exercise for the reader...

Given:

Re	- Constant radius	of the spheroid adopted
f	- Constant flattening	" " " "

```
        Phi_1,Lambda_1 - Latitude and longitude of first point
        Phi_2,Lambda_2 -    "      "      "     "  second  "

Convention:
        Phi     - Positive north, negative south (0 to +/- 90 deg)
        Lambda  - Positive east, negative west (0 to +/- 180 deg)

Required:
        s       - Distance between point 1 and 2
        A12     - Azimuth from point 1 to point 2
        A21     - Azimuth from point 2 to point 1

Computation:

    { Convert all the angles to radians now, and avoid the rush later... }

1.  Find Delta_Lambda = Lambda_2 - Lambda_1

    If Abs( Delta_Lambda ) > Pi radians
     Then
      Delta_Lambda = Lambda_2 - Lambda_1 - Pi * (Sign of (Lambda_2 - Lambda_1))

2.  Tan_Theta_1 = (1 - f) * Tan(Phi_1)
    Tan_Theta_2 = (1 - f) * Tan(Phi_2)

    { Calculate Theta_1 and Theta_2 from the above }

3.  k = Sin(Theta_1) * Sin(Theta_2)
    l = Cos(Theta_1) * Cos(Theta_2)

4.  Cos_Sigma = k + l * Cos(Delta_Lambda)

    Sin_Sigma = Sqrt[  ( Cos(Theta_2)*Sin(Delta_Lambda) )^2
                     + ( Sin(Theta_2)*Cos(Theta_1) -
                         Sin(Theta_1)*Cos(Theta_2)*Cos(Delta_Lambda) )^2  ]

    {  Take the positive square root for Sin_Sigma.  Watch all the
       brackets to make sure you get the correct expression.  Calculate
       Sigma from the numerically smaller of Cos_Sigma and Sin_Sigma.
       Make sure you calculate the value in radians, and calculate to
       the best accuracy you can, particularly for very short geodesics.}

     If you are calculating Sigma from Sin_Sigma, then:

         If Cos_Sigma > 0 then 0 <= Sigma <= Pi/2 radians
           { ie Sigma = Arcsine (Sin_Sigma) }

         If Cos_Sigma < 0 then Pi/2 <= Sigma <= Pi radians
```

{ ie Sigma = Pi - Arcsine (Sin_Sigma) }

If you are calculating Sigma from Cos_Sigma, then :

Sigma = Arccosine (Cos_Sigma)

5. c = (l * Sin(Delta_Lambda)) / Sin_Sigma

m = 1 - c^2

6. To make things simpler in the following equations, set:

P = Sigma
SinP = Sin_Sigma
CosP = Cos_Sigma

Then calculate:

```
s = Re*(1 - f)*[
     (1 + f + f^2)*P
   + k*((f + f^2)*SinP - 0.5*f^2*P^2*Cosec(P))
   + m*(-0.5*(f+f^2)*(P + SinP*CosP) + 0.5*f^2*P^2*Cot(P))
   + k^2 * (-0.5*f^2*SinP*CosP)
   + m^2 * (f^2*(P + SinP*CosP)/16 - 0.5*f^2*P^2*Cot(P) - (f^2*SinP*(CosP)^3)/
8)
   + k*m * (0.5*f^2*P^2*Cosec(P) + 0.5*f^2*SinP*(CosP)^2)
     ]
```

{ Note that ^ denotes exponentiation. Some parts of the expression can be simplified a bit, but that should be obvious. }

```
7. L = Delta_Lambda + c*[ (f + f^2)*P
          + k*(-0.5*f^2*SinP - f^2*P^2*Cosec(P))
          + m*(-(5/4)*f^2*P + (1/4)*f^2*SinP*CosP + f^2*P^2*Cot(P))
        ]
```

8.
$$\text{Tan\_A12} = \frac{\text{Cos(Theta\_2)}*\text{Sin(L)}}{\text{Sin(Theta\_2)}*\text{Cos(Theta\_1)} - \text{Sin(Theta\_1)}*\text{Cos(Theta\_2)}*\text{Cos(L)}}$$

$$\text{Tan\_A21} = \frac{\text{Cos(Theta\_1)}*\text{Sin(L)}}{\text{Sin(Theta\_2)}*\text{Cos(Theta\_1)}*\text{Cos(L)} - \text{Sin(Theta\_1)}*\text{Cos(Theta\_2)}}$$

To calculate the appropriate quadrant for A12 and A21:

	Tan(A12)		Tan(A21)	
Delta_Lambda	(> 0)	(< 0)	(> 0)	(< 0)
> 0	1	2	3	4
< 0	3	4	1	2

(Quadrant of A12, A21)

And that's all there is to it. You'll need to choose an appropriate spheroid for the calculation. In New Zealand, I use the Hayford International Spheroid (1924), which has Re = 6378388 metres, and f = 1/297.0, but these tend to vary between spheroids. It would be nice to think that amateurs could agree on a common spheroid, presumably one that is related to an international satellite-based spheroid, but I won't hold my breath on that one... Conversion between geoids in general is considered a "non-trivial task".

73s (or 73)
Stephen ZL4HG

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Date: Sat, 20 Feb 1993 16:20:16 GMT
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!neoucom.edu!
wtm@network.UCSD.EDU
Subject: 5/8 Wavelength Antenna Theory?
To: info-hams@ucsd.edu

Thanks to Fred for the good description of 5/8ths wave end-fed with loading coil versus .58 shunt fed antenna.

One member of my antenna collection is a Hustler 5/8th with loading coil for 2m. There does seem to be some lowering of radiation angle versus a 1/2 wave antenna, as experience shows that it is easier to make long distance contacts with the 5/8 in rural areas. In-city performance doesn't seem to be much different.

I suspect taht the 5/8 has a somewhat broader resonance

characteristic than a typical 1/2 wave vertical. I've noticed that the hustler tends to make my mobile rig more susceptible to spurious pick-up problems from pager transmitters. The plus side is that the VSWR across the band of interest would be more controlled.

I'd think that a 5/8th would be a good design to consider for people that want to consider glass mounted antennas. It is also a good design for cellular antennas because the bottom of the vertical element is easily formed into the necessary coil.

The Diamond SG7200NMO is an interesting antenna. It is a 2/.7m dual band. The mounting base apparently employs a shunt-fed matching coil, as there is a DC gound between the center pin and the threaded ring on the NMO mount. The shunt fed arrangement may be useful in helping dissipate static build-up. There are three additional loading coils in the vertical section: one coil is large spring-like and there are two potted coils. The whole assembly is about 36-1/4" long. The 2m is effectively 1/2w and the .7m is effectively 5/8w.

--
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wtm@uhura.neoucom.edu (140.220.1.1)   146.580: N8WED

Date: Sat, 20 Feb 1993 16:01:33 GMT
From: agate!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!rlong@ames.arpa
Subject: Antenna Tuner for Blind Ham
To: info-hams@ucsd.edu

I attempted to make a response to a message on this topic which had appeared previously but it did not seem to get posted.

It seems that a good solution would be the TUNER-TUNER from Palomar Engineers. It is a device which employs a noise bridge to make it possible to tune the antenna tuner without transmitting - and the adjustment can be by ear or by eye. You set the receiver to the desired frequency and turn on the device. A loud noise is heard. You tune the tuner until the noise disappears or is minimized. That could be by S-meter or ear.

Palomar Engineers
Box 462222

Escondido, CA 92046
619-747-3343
TUNER-TUNER $99.95.

Ron Long W8GUS.
w8gus@amsat.org.

Date: 20 Feb 93 23:28:51 GMT
From: news-mail-gateway@ucsd.edu
Subject: Bill Clinton and military surplus
To: info-hams@ucsd.edu

>Let's see, Clinton has 6 letters, Billary has 6 letters, does anyone
>know if Clinton's middle names have 6 letters? We all suspect him of
>being the anti-Christ, can we prove it?
>Gary

i always love to take the point that de debbil wouldn't use the "identifier" that's published in Revelations. And who sez it's a single entity. Lawyer, Doctor, Priest would be as good a choice for the number of the beast (in that these three groups are able to have major inputs into social policy and the beast is made of lots of individuals as opposed to being a single person.). even ties up nicely with the the 3-headed dog Cerebus.

several tried to pin the "666" label on Reagan. could be the "666" stuff is all bogus to throw true believers off the track. (the translators were possessed....8)). maybe it's 777 - but that's the title of a instrumental album by the same folks that are in "The Orb".

** Topic Drift is your Best Entertainment Value **

bill n. wb9ivr

Date: 20 Feb 93 12:06:00 GMT
From: usc!howland.reston.ans.net!gatech!pitt.edu!dsinc!ub!acsu.buffalo.edu!
ubvmsb.cc.buffalo.edu!oopdavid@network.UCSD.EDU
Subject: Computer-FT1000 Interface
To: info-hams@ucsd.edu

According to Yaesu, those of us with FT1000 tranceivers that are attempting computer control should place a 2.2 - 4.7 K resistor accross pins 1 & 2 of the DIN connector for the CAT Interface.
Hopes this helps. 73, Dave.

Date: Fri, 19 Feb 1993 19:46:22 GMT
From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@network.UCSD.EDU
Subject: help aligning Drake ML-2
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, jmccombi@testament.bbn.com (Jon McCombie) writes:

...
>I know how to adjust the xmit freq. (use a freq. counter); how do I
>adjust the recv freq.? I connected a DVM as directed in the manual, then
>xmited on that freq. with another radio while adjusting the trimmer.
...

I believe the discriminator output is supposed to go to zero when the
receiver is on frequency. It could well be that the discriminator
is mis-tuned (not adjusted to the center of the IF passband.)

Somewhere there should be a test point to indicate signal strength.
I would use the following pocedure: Using a signal generator that
is known to be on the correct frequency, adjust the receiver frequency
trimmer for an approximate peak. Now turn the trimmer clockwise
until the output drops to half. Now adjust the trimmer CCW until
the output again drops to the same level (half). Set the trimmer
halfway between these two points. For this to work, you will need
to be able to adjust the signal generator level so that it does not
"max out" the test point reading. (In other words, using a nearby
transmitter as a signal source probably will give too strong a signal.)

Then adjust the discriminator so that the discriminator tuning
is zero volts. If this doesn't work, then adjust the discriminator
tuning for best-sounding audio on a modulated signal.

AL N1AL

Date: Fri, 19 Feb 1993 19:59:59 GMT
From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@network.UCSD.EDU
Subject: Long Ground Lines
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, a-kevinp@microsoft.COM (Kevin Purcell, Rho) writes:

>Jon Bloom says:

>In that case, you may want to inhibit the induced

>current by winding the coax into a coil just before it enters the
>house. This is easy and effective. Use 6-8 turns of coax, typically,
>made from 8-10 feet of coax.

>I say:

>An aside to this is that these air-cored baluns (for that is what it
>is) are only effective at 14Mhz (or so) and above. There is not enough
>inductance in the winding to kill of the RF on the outside of the braid
>at the low bands. For that you need some ferrite/powdered iron beads.

Even at 146 MHz, the air-wound choke is not as effective as one with
a core. Last weekend WB6FRZ and I were doing some experiments measuring
feedline currents on ground plane and J-pole antennas. We found that if
you happen to hit the right (wrong) resonant feedline length, you get
humongous currents on the coax shield, especially with the J-pole.
Adding a 5 or 6 turn loop in the coax changes the resonant length,
but there is still some feedline length that results in large currents.
With the coax wrapped around a toroid, we didn't have that problem.

My theory is that the toroid adds not only inductance, but (loss)
resistance, so its choking action does not depend so much on
whether the feedline shield is resonant.

AL N1AL

Date: 19 Feb 93 17:42:12 GMT
From: plx!uupsi!psinntp!arrl.org@sun.com
Subject: Morse Code Processor
To: info-hams@ucsd.edu

In sci.electronics, hyx1@cunixb.cc.columbia.edu (Harry Y Xu) writes:
>   I'm thinking about building a "Morse Code Processor" for my
>Microprocessor Lab class.
>   The machine is expected to receive CW (not limited to machine
>generated) from the radio and display the characters on a 16x1 (or 16x2)
>LCD display. It also transmits and displays character inputs from a
>keyboard. It's just a thought.
>   Has anyone ever heard of such a machine in existance?

A machine that almost exactly fits that description (except it also
does RTTY and AMTOR decoding) is described in the June 1991 issue of
QEX magazine. Contact mweinber@arrl.org for reprint info.

Jon Bloom, KE3Z | jbloom@arrl.org
American Radio Relay League | Justice is being allowed to do whatever

225 Main St. | I like. Injustice is whatever prevents
Newington, CT 06111 | my doing so. -- Samuel Johnson

Date: 20 Feb 93 16:44:13 GMT
From: ogicse!emory!gatech!howland.reston.ans.net!usenet.ins.cwru.edu!neoucom.edu!wtm@network.UCSD.EDU
Subject: Old car radios had PTO's
To: info-hams@ucsd.edu

I have an old Delco wonder-bar radio from a 1957 Cadillac. It uses PTO type mechanism with a rack that moves four cores. It is pretty neat how it works. There is a BIG solenoid that moves the rack to the inner most position of ~550 KHz and winds a clock spring. The solenoid takes almost 30 amps to actuate. There is a smaller solenoid that opens a pawl to allow the spring unwind toward 1600 KHz. There are five pre-sets that permit the signal-seek to operate over a narrow range. Hitting the bar at the top of the dial finds the nearest strong signal. The audio amp is in a separate chassis with vibrator supply and speaker assembly.

If anyone has a 3-pin Delco vibrator she/he doesn't want, I'd be interested. I rigged up a transistor chopper to run the power supply as a solution for now.

One thing is for sure; you wouldn't want to listen to this radio too long without the engine running to keep the battery charged!

By the way, the first time I can actually remember seeing a transistor was on my parent's 1957 DeSoto. The AM radio was tube-type, but apparently had a transistor chopper. I remember crawling up under the dash when I was a kid and seeing a big power transistor on the case of the radio.

I just got rid of my old military version of the 51-J3. That radio was a very neat piece of mechanical work. I never opend up the PTO assembly due to the warranty sticker (and there was no real need to disassemble it). The manual had a nice picture of the inside. Neat use of the "corrector stack." Neat too, was the use of capacitors for temperature correction. I'm willing to believe that Collins had one or two expert PTO winders as described previously!

--
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Date: 20 Feb 93 20:24:36 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS$051.2liners
To: info-hams@ucsd.edu

SB KEPS @ AMSAT $ORBS-051.N
2Line Orbital Elements 051.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM N3FKV HEWITT, TX   February 20, 1993 BID:$ORBS-051.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83058 B 93049.63647051 .00000000 00000-0 99999-4 0 09694
2 14129 027.0170 039.3347 5996940 059.0327 346.4198 02.05878389 72827
UO-11
1 14781U 84 21 B 93046.09611398 .00000549 00000-0 10184-3 0 4007
2 14781 97.8238 77.8331 0012964 31.5913 328.6069 14.68858390478794
RS-10/11
1 18129U 87 54 A 93048.72858228 .00000097 00000-0 99999-4 0 5565
2 18129 82.9281 326.9109 0010904 295.6648 64.3373 13.72308611283468
AO-13
1 19216U 88 51 B 93045.46345107 -.00000062 00000-0 99999-4 0 5637
2 19216 57.6475 332.9272 7262121 308.3679   6.4386 2.09722755 35789
FO-20
1 20480U 90 13 C 93044.20455127 .00000017 00000-0 67260-4 0 4384
2 20480 99.0594 283.7688 0540939   7.5528 353.3323 12.83217568141417
AO-21
1 21087U 91 6 A 93048.73918589 .00000101 00000-0 99999-4 0 7010
2 21087 82.9445 141.2286 0035815 356.7600   3.3311 13.74509449103039
RS-12/13
1 21089U 91 7 A 93043.01588136 .00000085 00000-0 83733-4 0 3937
2 21089 82.9213 14.9359 0030957 33.2578 327.0513 13.74014278101336
UO-14
1 20437U 90 5 B 93047.70497863 .00000149 00000-0 66053-4 0 7218
2 20437 98.6237 133.2942 0011109 175.2832 184.8457 14.29735882160213
AO-16
1 20439U 90 5 D 93046.10058181 .00000195 00000-0 83708-4 0 5449

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2 20439  98.6313 132.4918 0011058 180.0793 180.0392 14.29795854159991
DO-17
1 20440U 90  5  E 93043.72242124  .00000192  00000-0  82144-4 0  5460
2 20440  98.6309 130.3095 0011191 188.0644 172.0363 14.29927437159669
WO-18
1 20441U 90  5  F 93035.22338149  .00000233  00000-0  98128-4 0  5476
2 20441  98.6311 121.9214 0011597 215.3259 144.7153 14.29908715158455
LO-19
1 20442U 90  5  G 93046.07887758  .00000203  00000-0  86680-4 0  5452
2 20442  98.6319 132.8348 0012282 180.8662 179.2508 14.30000338160017
UO-22
1 21575U 91 50  B 93040.24894820  .00000225  00000-0  83183-4 0  2436
2 21575  98.4864 118.3602 0007834 324.9777  35.0893 14.36774641 82295
KO-23
1 22077U 92 52  B 93006.08586143 -.00000000  00000-0  99999-4 0   866
2 22077  66.0809 303.5860 0013347 229.3565 130.6278 12.86275910 18999
NOAA-9
1 15427U 84123  A 93050.07899278  .00000372  00000-0  19801-3 0 02979
2 15427 099.1150 088.1399 0015183 140.8102 219.4698 14.13483652422091
NOAA-10
1 16969U 86073  A 93050.02020305  .00000116  00000-0  49921-4 0 01454
2 16969 098.5203 068.5031 0013117 302.1034 057.9405 14.24765170333803
MET-2/17
1 18820U 88  5  A 93038.77229793  .00000091  00000-0  75662-4 0  8527
2 18820  82.5454 301.8563 0017353 125.9575 234.3197 13.84672292253933
MET-3/2
1 19336U 88 64  A 93045.11623004  .00000043  00000-0  99999-4 0   229
2 19336  82.5461 309.0495 0018658  42.5340 317.7241 13.16955602219012
NOAA-11
1 19531U 88 89  A 93047.14200675  .00000254  00000-0  15707-3 0   478
2 19531  99.1163  20.6309 0012745  59.6493 300.5919 14.12826250226586
MET-2/18
1 19851U 89 18  A 93042.82302713  .00000100  00000-0  84194-4 0  7959
2 19851  82.5205 174.8553 0014499 158.1592 202.0188 13.84319416199841
MET-3/3
1 20305U 89 86  A 93047.00479085  .00000043  00000-0  99999-4 0  6978
2 20305  82.5439 250.3460 0018007  56.8259 303.4586 13.16009122159160
MET-2/19
1 20670U 90 57  A 93042.99068402  .00000098  00000-0  82584-4 0  5457
2 20670  82.5431 237.8100 0017147  82.1184 278.1922 13.84160808132809
FY-1/2
1 20788U 90 81  A 93042.94958910  .00000021  00000-0  25449-4 0  5151
2 20788  98.8754  72.8206 0013122 296.3149  63.6675 14.01271376125043
MET-2/20
1 20826U 90 86  A 93042.84921834  .00000103  00000-0  87744-4 0  5453
2 20826  82.5257 176.0949 0013453 347.7867  12.2964 13.83532804119959
MET-3/4
1 21232U 91 30  A 93047.31150673  .00000043  00000-0  99999-4 0  3497
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2 21232  82.5471 153.2127 0018161 334.4273  25.5954 13.16819124 87419
NOAA-12
1 21263U 91 32  A 93047.02237218  .00000216  00000-0  11438-3 0  5026
2 21263  98.6708  79.2140 0012560 201.9313 158.1322 14.22200148 91422
MET-3/5
1 21655U 91 56  A 93047.08688452  .00000043  00000-0  99999-4 0  3994
2 21655  82.5547 100.0577 0013039 338.0389  22.0180 13.16816679 72484
MIR
1 16609U 86017  A 93050.08727348  .00020193  00000-0  25438-3 0 08887
2 16609 051.6227 092.5136 0002589 017.2740 342.8973 15.58954964400712
HUBBLE
1 20580U 90 37  B 93048.66205994  .00001810  00000-0  15841-3 0   352
2 20580  28.4681 114.3775 0004375 227.5728 132.4507 14.92336691153641
GRO
1 21225U 91 27  B 93049.16981998  .00032644  00000-0  27201-3 0  8204
2 21225  28.4644  82.5669 0004958 223.2147 136.8069 15.68578085106503
SARA
1 21578U 91 50  E 93046.08354844  .00000539  00000-0  19097-3 0  4065
2 21578  98.4893 124.9416 0004521 314.4285  45.6593 14.38227185 83174
UARS
1 21701U 91 63  B 93048.72328044  .00002699  00000-0  25594-3 0  2395
2 21701  56.9850 300.3346 0004612  83.4572 276.6477 14.96600732 78414
FREJA
1 22161U 92 64  A 92365.58631514  .00000284  00000-0  18456-3 0   971
2 22161  63.0059 201.9500 0769497 267.8411  83.4390 13.21543263 11273
/EX
```

Date: Fri, 19 Feb 1993 20:04:27 GMT
From: sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!alanb@network.UCSD.EDU
Subject: RF and Power Supply
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, a-kevinp@microsoft.COM (Kevin Purcell, Rho) writes:

>Scott Renfro, km6hd says:

>2. Break the ground loop by isolating your power supply (or radio, or ???)
>   from the household electrical ground using a '3 prong to 2 prong'
>adaptor.
>   Since this equipment is already grounded to your ground system
>   (see 1. above) it is safe but opens the problem loop.

>I say:

>Hmmm, killing youself to kill an earth loop. Good trade off, eh!

>NEVER do this.

[pages of solutions deleted}

Actually, the easiest way to break the loop is to wrap the line cord
around a big, high-mu, lossy toroid. A cheaper alternative is to use
the loopstick antenna from an old AM radio and wrap the line cord
around that.

AL N1AL

Date: Sat, 20 Feb 1993 13:43:58 GMT
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!
rlong@network.UCSD.EDU
Subject: visual impaired person tuning manual antenna tuner?
To: info-hams@ucsd.edu

I think this problem (sight impaired person tuning an antenna
tuner) is easily solved with a product from
Palomar Engineers
Box 462222
Escondido, CA 92046
619-747-3343

It is called the TUNER-TUNER and costs $99.95.

It combines a noise bridge and switching circuitry in a clever
way. You turn it on and hear broadband noise in your receiver.
Adjust the tuner until the noise goes away and you are properly
tuned. They promote it as a way of tuning without turning on
the transmitter. I guess we all should have one!

73, Ron W8GUS.

Date: Sun, 21 Feb 1993 00:08:09 GMT
From: usc!howland.reston.ans.net!gatech!concert!rock!taco!
csemail.cropsci.ncsu.edu!samodena@network.UCSD.EDU
Subject: visual impaired person tuning manual antenna tuner?
To: info-hams@ucsd.edu

In article <C2qn7C.7B8@news.ucs.mun.ca> dlawlor@morgan.ucs.mun.ca (Doug Lawlor)
writes:
>Does anyone have any pointers on how someone who is visually
>impaired can tune a manual antenna tuner? One idea I had was to

>use those old tone meters which was used by the members of the
>CNIB Amateur radio program to tune the tubes in the old heath-kit
>hw12/hw22/hw32 rigs. Would this work? Any information on this
>would be appreciated.
>Thanks in advance.
>Doug
>
>--
>Doug Lawlor, vo1cm
>Internet: dlawlor@morgan.ucs.mun.ca or dlawlor@kean.ucs.mun.ca

On the assumption that you mean tune up for HF:

Buy a Palomar Tuner-Tuner....which is a combination noise bridge preset for
50 ohms resistive and a switching arrangement for being "in line" during
passive adjustment of the transmatch and "out of line" for ready-to-go
operation.

Though I have not used the Palomar specifically, I have worked with a
vision-impaired ham who used a noise-bridge and two antenna switches. I
worked with him because the noise bridge-aided tuneup did not seem to get
it on-the-money....which turned out to be a defect in the design of the
particular noise bridge....when we used my MFJ noise bridge, the passive
tune up was spot-on for transmit...but with his noise bridge (*not* a Palomar)
the SWR on transmit was >2.0.....

Steve

+---+
| In person: Steve Modena   AB4EL |
| On phone: (919) 515-5328 |
| At e-mail: nmodena@unity.ncsu.edu |
| samodena@csemail.cropsci.ncsu.edu |
| [either email address is read each day] |
| By snail: Crop Sci Dept, Box 7620, NCSU, Raleigh, NC 27695 |
+---+

         Lighten UP! It's just a computer doing that to you.   (c)
OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

Date: Thu, 18 Feb 1993 11:31:04 GMT
From: anomaly.sbs.com!anomaly.sbs.com!kd1hz@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Feb09.225931.5179@anomaly.sbs.com>,
<1lp4sqINNhl6@network.ucsd.edu>, <1lpc1bINN9gr@geraldo.cc.utexas.edu>

Subject : Re: Allison Peacock -- KD4NNH/AG

davros@ccwf.cc.utexas.edu (Buddy Brannan) writes:

>_How_ she took the test, as long as the methods
>are legal, isn't important.

Hogwash.

>As for you, Mr. Deignan ... I have yet to see something positive from you.

You don't read enough then.

>I am surprised that you got into ham radio at all, because it seems that you
>really don't like anybody!

Nope. Remember my last signature: "I'm not a bigot, I hate everyone".

>I am appalled at your lack of soul.

I prefer to call it "being a hard-ass".

> No words of welcome
>for a newcomer, nothing but: "Why are you proud of someone who memorized the
>questions?"

That's right. I, for one, think that this hobby has decided to sacrifice
quantity for quality - a definite mistake which has riddled the amateur
world with a flood of CB-transplants.

MD
--
-- Michael P. Deignan, KD1HZ | --- ..- .-.   .-. . .--. . .- - . .-.
-- Domain: mpd@anomaly.sbs.com | -- --- - - ---   -. ---   -.-. --- -.. . ...
--   UUCP: uunet!anomaly!mpd | ..-. --- .-.   -. --- -.-. --- -.. . ...
-- Telebit: +1 401 455 0347 | .-. . -. .-.. .... -. -- ...

End of Info-Hams Digest V93 #238
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